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SOVIET GROSS NATIONAL PRODUCT, 1950-60

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SOVIET GROSS NATIONAL PRODUCT, 1950-1960

A. Summary

The Soviet Gross National Product (GNP) increased from 772 billion rubles (factor cost,\* 1953 rubles) in 1950 to 1,086 billion rubles in 1955, or almost 41 percent. By 1960 the Soviet GNP is expected to be 1,520 billion rubles, an increase of 40 percent over the 1955 level. This represents an average annual increase of 7 percent for the decade 1950 to 1960.

As indicated in Table 1, differential rates of growth among the uses of the national product during the period 1950-55 resulted in an increase of the share of Soviet GNP allocated to investment and a corresponding decline in the shares allocated to consumption and administration. However, the share of defense remained almost unchanged. These differential growth rates are expected, on the basis of the Sixth Five-Year Plan, to continue to 1960. Consequently, investment will increase its claim on the national product from 23 percent in 1950 to 30 percent in 1960.

Differential rates of growth also occurred among the sectors originating the Soviet national product (see Table 2). Industry (including construction) and transportation-communications, growing much more rapidly than the remainder of GNP, increased their contributions to the national product substantially from 1950 to 1955. The rapid development of industry and transport as compared to agriculture, trade, and services is expected to continue to 1960. This will have the effect of increasing the share of the national product originating in industry-construction

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\* For the purposes of the intertemporal comparisons of Soviet GNP the factor cost measurement of national product is employed in this report. Following the practice of Gilbert and Kravis (An International Comparison of National Products, OEEC, Paris), factor cost is defined as market price minus in-

and transportation-communications from 40 percent in 1950 to 56 percent in 1960.

The ruble figures for Soviet GNP by end-use were converted to 1955 market dollars; the resulting dollar figures, using a Soviet product mix, are presented in Table 3 and dollar figures calculated by using a US product mix are presented in Table 4.\* No conversion of Soviet GNP by sector of origin was attempted since the available price data are insufficient to calculate appropriate ruble-dollar ratios for sectors of origin.

The dollar figures obtained by using a Soviet product mix are significantly higher than those using the US product mix because, in the former, there is a higher proportion of goods which have high dollar prices relative to other goods in the same category. Owing to this problem of product mixes, both within an end-use category and between such categories, the results obtained by using the Soviet product mix tend to overstate the dollar value of Soviet GNP and its components whereas the results obtained using the US product mix tend to understate this dollar value. A cross between the two results may therefore be regarded as yielding less biased dollar figures.

Whether or not a cross is used, it is evident that consumption constitutes a smaller proportion of GNP when valued in dollars than when valued in rubles; conversely, defense constitutes a larger percentage. This reflects the fact that the ruble-dollar ratio for consumption is higher than for total GNP and that for defense is lower. The ruble-dollar ratio for investment, on the other hand, is close to that for total GNP and consequently its share remains substantially the same.

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\* See Section D below for an explanation of the methodology used in making these end-use conversions.

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TABLE 1

SOVIET GNP BY END-USE, AT RUBLE FACTOR COST\* 1950, 1953, 1955, AND 1960

	<u>1950</u>	<u>1953</u>	<u>1955</u>	<u>1960</u>
<b>A. <u>Billion 1953 rubles</u></b>				
Consumption	451.3	558.1	622.8	834.6
Investment	178.4	232.3	283.6	462.3
Defense	109.9	128.0	150.5	192.6
Administration	<u>32.1</u>	<u>30.4</u>	<u>28.9</u>	<u>30.1</u>
TOTAL GNP	771.7	948.8	1,085.8	1,519.6
<b>B. <u>Index (1950 = 100)</u></b>				
Consumption	100	124	138	185
Investment	100	130	159	259
Defense	100	116	137	175
Administration	<u>100</u>	<u>95</u>	<u>90</u>	<u>94</u>
TOTAL GNP	100	123	141	197
<b>C. <u>Percent</u></b>				
Consumption	58.5	58.8	57.4	54.9
Investment	23.1	24.5	26.0	30.4
Defense	14.2	13.5	13.9	12.7
Administration	<u>4.2</u>	<u>3.2</u>	<u>2.7</u>	<u>2.0</u>
TOTAL GNP	100.0	100.0	100.0	100.0

\* The estimates of GNP presented in this table were derived from a set of income and outlay accounts constructed for the Soviet economy for the year 1953. The end-use figures for 1953 were moved by indexes to obtain estimates for the other years (see Sections B and C for methodological details).

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TABLE 2

SOVIET GNP BY SECTOR OF ORIGIN, AT RUBLE FACTOR COST\* 1950, 1953, 1955, AND 1960

	<u>1950</u>	<u>1953</u>	<u>1955</u>	<u>1960</u>
A. <u>Billion 1953 Rubles</u>				
Agriculture	260.8	277.0	300.8	360.2
Industry, including Construction	250.8	351.1	435.4	699.0
Transport and Communications	60.2	82.5	99.9	150.4
Trade and Services	<u>199.9</u>	<u>238.2</u>	<u>249.7</u>	<u>310.0</u>
TOTAL	771.7	948.8	1,085.8	1,519.6
B. <u>Index (1950 = 100)</u>				
Agriculture	100	106	115	138
Industry, including Construction	100	140	174	279
Transport and Communications	100	137	166	250
Trade and Services	<u>100</u>	<u>119</u>	<u>125</u>	<u>155</u>
TOTAL	100	123	141	197
C. <u>Percent</u>				
Agriculture	33.8	29.2	27.7	23.7
Industry, including Construction	32.5	37.0	40.1	46.0
Transport and Communications	7.8	8.7	9.2	9.9
Trade and Services	<u>25.9</u>	<u>25.1</u>	<u>23.0</u>	<u>20.4</u>
TOTAL	100.0	100.0	100.0	100.0

\* The estimates of GNP presented in this table were derived from a set of income and outlay accounts constructed for the Soviet economy for the year 1953. The sector figures for 1953 were moved by indexes to obtain estimates for the other years (see Sections B and C for methodological details).

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TABLE 3

SOVIET GNP BY END USE, 1950, 1953, 1955, AND 1960  
(Computed in dollar market prices, using Soviet product mix)

	<u>1950</u>	<u>1953</u>	<u>1955</u>	<u>1960</u>
A. <u>Billion 1955 dollars</u>				
Consumption	62.6	78.0	87.0	116.6
Investment	27.0	35.1	42.9	69.9
Defense	28.9	33.7	39.6	50.7
Administration	<u>14.8</u>	<u>14.0</u>	<u>13.3</u>	<u>13.8</u>
TOTAL GNP*	133.3	160.8	182.8	251.0
B. <u>Index (1950=100)</u>				
Consumption	100	125	139	186
Investment	100	130	159	259
Defense	100	117	137	175
Administration	<u>100</u>	<u>95</u>	<u>90</u>	<u>93</u>
TOTAL GNP	100	121	137	188
C. <u>Percent</u>				
Consumption	47	48	48	47
Investment	20	22	23	28
Defense	22	21	22	20
Administration	<u>11</u>	<u>9</u>	<u>7</u>	<u>5</u>
TOTAL GNP	100	100	100	100

\* The dollar values in this table were derived by applying the appropriate sector dollar-ruble ratio to the ruble value of the end use components for each year. The somewhat slower rate of growth of the dollar total, as compared with the ruble total shown in Table 1, results from the different component weights which are implicit in this procedure as compared with the factor cost ruble weighted GNP index.

TABLE 4

SOVIET GNP BY END USE, 1950, 1953, 1955 AND 1960  
(Computed in dollar market prices, using US product mix)

	<u>1950</u>	<u>1953</u>	<u>1955</u>	<u>1960</u>
<b>A. <u>Billion 1955 dollars</u></b>				
Consumption	42.6	53.0	59.1	79.2
Investment	22.3	29.0	35.4	57.7
Defense	26.3	30.6	36.0	46.1
Administration	<u>14.8</u>	<u>14.0</u>	<u>13.0</u>	<u>13.8</u>
TOTAL*	(79A)	(103.1)	(113.7)	(159.2)
<b>B. <u>Index (1950 = 100)</u></b>				
Consumption	100	124	139	186
Investment	100	130	159	259
Defense	100	116	137	175
Administration	<u>100</u>	<u>95</u>	<u>90</u>	<u>93</u>
TOTAL	100	130	143	200
<b>C. <u>Percent</u></b>				
Consumption	40	42	41	40
Investment	21	23	25	29
Defense	25	24	25	24
Administration	<u>14</u>	<u>11</u>	<u>9</u>	<u>7</u>
TOTAL	100	100	100	100

\* The end-use components do not add to the totals given. The dollar values for the end-use categories were derived by applying the appropriate dollar-ruble ratio to the ruble value of each category. The totals presented do not constitute the sums of these dollar values, but rather are the result of applying a total dollar-ruble ratio (US product mix) to the Soviet GNP total. These total dollar-ruble ratios were derived by weighting the individual



B. Base Year (1953) GNP

1. Basic Accounts

Detailed income and outlay accounts were constructed for 1953, according to the system of accounts adopted by OEEC. (see Appendix A for details). Sector accounts were drawn up for Households, Economic Enterprises, and Government. For each of the sectors, entries were grouped into production, appropriation (consumption), and capital accounts. All entries were in current (that is, 1953) rubles. Individual entries were obtained directly from announced Soviet value figures or derived from analysis of announced percentage increases or postwar and prewar relationships. The sum of entries in the consolidated production account constituted GNP at market prices, amounting to 1,093.2 billion rubles for 1953 (see Table 5).

To obtain GNP at factor cost, it was necessary to add subsidies to the GNP at market prices and to deduct indirect taxes included in GNP at market prices. In 1953 subsidies were rather small outside of agriculture and were therefore disregarded in this computation. In agriculture they amounted to an estimated 15.1 billion (see Appendix Table II, A, item 3). While this subsidy figure is not explicitly added in making the adjustment to factor cost, the method used in calculating the uncompensated factors in agriculture takes Soviet subsidies automatically into account. This method is as follows:

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TABLE 5

SOVIET GNP BY END USE, AT MARKET PRICES AND FACTOR COST

1953

<u>End Use</u>	<u>Billion 1953 Rubles</u>	
	<u>Market Prices</u>	<u>Factor Cost</u>
Consumption	694.1	558.1
Investment	235.3	232.3
Defense	131.5	128.0
Administration	<u>32.3</u>	<u>30.4</u>
TOTAL	1,093.2	948.8

TABLE 6

SOVIET GNP BY SECTOR OF ORIGIN, AT FACTOR COST

1953

<u>Sector</u>	<u>Billion 1953 Rubles</u>	<u>Percent</u>
Agriculture	277.1	29.2
Industry	283.1	29.8
Construction	68.1	7.2
Transport	78.1	8.2
Communications	4.8	0.5
Trade	58.4	6.2
Services	<u>179.2</u>	<u>18.9</u>
TOTAL	948.8	100.0

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The estimate of GNP at market prices includes both explicit turnover tax collections of 243.6 billion rubles and imputed turnover taxes of 18.5 billion rubles, corresponding to turnover taxes estimated to have been included in the valuation of farm income in kind. The very low prices at which agricultural crops are delivered to the state, in relation to the free market or retail prices, implies that a portion of the factor cost of producing agricultural crops may be concealed in the turnover tax. That interest, land rents, depletion, and obsolescence of plant and equipment are not explicitly taken into account in Soviet pricing, lends strength to this view. For this reason, it is assumed that Soviet turnover tax revenues represent in part indirect taxes and in part a factor payment allocatable to agriculture.

Known references in Soviet literature do not help in determining the breakdown of the turnover tax into factor costs and indirect tax. Principal reliance was placed, therefore, on US analogy. It was assumed that the Soviet farmer's share would be the same percent of the gross retail value of agricultural products as the US farmer's share. The subtraction of the Soviet farmer's actual cash and in-kind receipts for the total so calculated gives that part of the turnover tax which may be considered factor payment. This component, estimated at 117.7 billion rubles in 1953, was allocated to agriculture and deducted from total explicit and imputed turnover taxes of 262.1 (243.6 + 18.5) billion rubles to obtain the indirect tax component, amounting to 144.4 billion rubles. Deduction of these indirect taxes from GNP at market prices yielded a GNP at factor cost of 948.8 billion rubles.

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## 2. GNP by End Use

GNP was distributed among Consumption, Investment, Defense, and Administration by classifying the entries in the consolidated production account. Sales to household consumption were classified as Consumption and gross domestic investment as Investment. General government purchases of goods and services were allocated among the four end-use categories on the basis of sector entries and state budget data. The distribution of GNP by end-use at market prices, shown in Table 5, was obtained in this manner.

To obtain GNP by end use at factor cost, also shown in Table 5, indirect taxes (that is, the indirect tax component of the turnover tax) were deducted from each end-use category. The indirect taxes falling on each end-use were calculated by estimating the amount of each category subject to indirect taxes (that is, the turnover tax) and applying to these amounts the average rate of indirect taxation. The taxable amounts in each category were estimated by examining the component entries in each category to determine those subject to the turnover tax. The average rate of indirect taxation was computed as the quotient of (1) total indirect taxes to be allocated, divided by (2) total taxable turnover.

## 3. GNP by Sector of Origin

The distribution of GNP by sector of origin was estimated by calculating the value added in six sectors (Agriculture, Construction, Transport, Communications, Trade, and Services) and deducting the sum of these value added contributions from total GNP at factor cost to derive the seventh sector (Industry) as a residual. (See Table 6)

Value added in agriculture is the sum of the following: state farm and MTS wages, collective farm income distributed to farm members, farm

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household income from sales to the state and on the collective farm markets, income in kind, imputed rent, collective farm savings, and the factor payment component of the turnover tax. From the total of these components, however, were deducted (1) trade expenses corresponding to value added in collective farm market trade and (2) home processing costs.

Value added in construction was calculated from the composition of construction costs and the estimated value of construction in 1953. Value added in transport was estimated on the basis of the cost structure of railroad transport in 1951, adjusted for the increase in traffic and in money wages to 1953. The value added contribution of communications consists of the non-investment portion of estimated outlays of the Soviet communications industry; it is assumed that outlays other than for investment were used to compensate employees and amortize capital equipment. Value added in trade was assumed to be equal to operating costs, which were reported as a percentage of trade turnover.

Value added in services comprises wages paid in education and health services, military pay and subsistence, government administration, internal security, rental payments for housing, other housing services, and expenditures for personal services.

C. Estimates for 1950, 1955, and 1960

1. GNP by End Use

End use distributions for 1950, 1955, and 1960 were derived by moving the 1953 end use distribution by indexes of GNP by end use. These indexes (shown in Table 1) use average prices for each of the two periods covered, namely the years 1951-55 and 1956-60. The four end use indexes were constructed in the following manner:

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(1) Consumption

The consumption index is a weighted average of consumption indexes for food; nonfood consumer goods; and services, including housing and utilities, transport, and communications. The basis for the commodity estimates consists of physical production estimates adjusted for foreign trade and inventory changes. The commodities are valued at 1955 retail prices to obtain indexes for the chief components of consumption. The housing and utilities portion of the consumer services index is an index of available urban housing space. The transport and communications indexes include passenger kilometers in rail, streetcar, bus, inland waterway, and ocean traffic; and the number of telegraph and telephone messages transmitted. Other services included in the index are education, medical, and personal services. These are based, respectively, on the educational and medical budgets deflated by appropriate price indexes, and on the trend of social insurance payments to the budget. The weight for each services component is the respective amount of gross expenditures in 1955. Similarly, services are weighted relative to commodities by 1955 gross outlays.

(2) Investment

The investment index consists of deflated indexes of state capital investment, collective farm investment, and capital repairs. The main exclusion is accretions to working capital. The state capital investment index is based on the 1950 current value of investment moved by the official volume index. The official index is a linked series using 1945 prices for the years 1948-50, 1950 prices for 1950-55, and 1955 prices for 1955-60. The collective farm investment index consists of

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current values of investment, converted to constant 1950 prices by the implicit deflator for state capital investment adjusted to account for the different composition of collective farm investment. The index of capital repairs is based on estimates of current values, deflated by the implicit state capital investment price index. The total investment index is thus computed from time series for all three types of investment expressed in 1950 prices.

(3) Defense

The index of defense expenditures is <sup>a</sup> weighted average of indexes of military hard goods procurement, personnel pay, personnel subsistence, operations and maintenance, and miscellaneous activities. All weights are expressed in terms of 1951 prices. The procurement index represents production of military end items, including spare parts and support equipment. The personnel pay index is based on manpower strength at 1951 pay scales for various types of military organizations. The personnel subsistence index is a function of the manpower strength of the military establishment; it is internally weighted by the 1951 cost of food, clothing, and personal service allowances. The operations and maintenance index is a function of the estimated stock of military equipment. The index of miscellaneous activities (transport, communications, construction, etc.) is based on direct estimates of the movement of these items. The 1951 weights for the component indexes are determined by their respective gross ruble values.

(4) Administration

The administration index is a time series of budgetary expenditures for administration and estimated outlays for internal security, deflated by a money wage index.

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## 2. GNP by Sector of Origin

Sector of origin distributions for 1950, 1955, and 1960 were obtained by calculating quantity indexes for each sector of origin and weighting the indexes by the value added in each sector in the base year, expressed as a percent of total GNP in the base year. Quantity indexes were computed for Agriculture, Industry, Construction, Transport, Communications, Trade, and Services and weighted by the percentage weights for 1953 shown in Table 6. The resulting sector shares of GNP were consolidated into the four sectors in percentage terms and in 1953 rubles as shown in Table 2.

The agricultural production index is based on estimated output of basic food crops, industrial crops, and principal livestock products. Price weights of the year 1950 were used; these prices include the turnover tax but exclude transport. The index represents estimates of agricultural output for sale and for home consumption. Feed for livestock and seed have been deducted from total output, in order to approximate more closely an index of value added in agriculture.

The industrial production index is composed of indexes of materials, fabricated metals (including defense industry), and consumers' goods. Each of the component indexes is weighted by its gross value output in 1950. For 1960, the announced Soviet plan figures have been used. The construction index is based on estimated expenditures on construction, derived from investment data and adjusted to constant rubles by an appropriate deflator.

The transportation index is based on total ton-kilometer performance of Soviet transport (rail, river, ocean, highway, passenger via rail, and

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pipeline), with each component weighted by its average price in 1951. The communications index is based upon the number of telegrams, paid letters, and long distance calls and the amount of home and business telephone service revenue, weighted by average prices in 1953.

The trade index was constructed on the assumption that trade changed in the same proportion as consumer goods output. The services index is a weighted average of sector indexes for education, health, housing and utilities, administration, military services, and personal services.

D. Conversion of Ruble Values into Dollars

GNP estimates expressed in 1953 rubles were converted into 1955 dollars through the use of two sets of end use, market price, ruble-dollar ratios. One set of ratios was constructed by weighting the components within each end use category according to the Soviet mix and the other by weighting the components according to the US mix.

Because the basic ruble-dollar ratios for Consumption, Investment, and Administration were constructed for 1950, several steps were necessary in order to derive 1953 ruble-1955 dollar ratios for these end use categories. These steps were: (1) constructing a 1950 ruble-1950 dollar ratio for each GNP end use category; (2) deriving a 1950 ruble-1953 ruble index; (3) applying the 1950 ruble-1953 ruble index to the 1950 ruble-1950 dollar ratio to obtain a 1953 ruble-1950 dollar ratio; and (4) deriving a 1955 dollar-1950 dollar index and applying it to the 1953 ruble-1950 dollar ratio to obtain a 1953 ruble-1955 dollar ratio. In equation form, the method was as follows:

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$$\frac{1950 \text{ rubles}}{1950 \text{ dollars}} + \frac{1950 \text{ rubles}}{1953 \text{ rubles}} = \frac{1953 \text{ rubles}}{1950 \text{ dollars}}$$

$$\frac{1953 \text{ rubles}}{1950 \text{ dollars}} + \frac{1955 \text{ dollars}}{1950 \text{ dollars}} = \frac{1953 \text{ rubles}}{1955 \text{ dollars}}$$

OR

$$\frac{\frac{1950 \text{ rubles}}{1950 \text{ dollars}}}{\frac{1950 \text{ rubles}}{1953 \text{ rubles}}} \times \frac{1955 \text{ dollars}}{1950 \text{ dollars}} = \frac{1953 \text{ rubles}}{1955 \text{ dollars}}$$

Ruble-dollar ratios for Defense, according to the Soviet and US mixes, were constructed for 1951 and moved to a 1953 ruble-1955 dollar ratio by the use of a 1951 ruble-1953 ruble index and a 1955 dollar-1951 dollar index.

a. 1950 Ruble-1950 Dollar Ratios

Ruble-dollar ratios for 1950 for Consumption, Investment, and Administration and for 1951 for Defense were obtained by deriving aggregate ruble-dollar ratios for the principal components of each end-use and weighting the components according to both US and Soviet mixes to obtain end-use ruble-dollar ratios.

1) Consumption

Aggregate ruble-dollar ratios were obtained for the three principal categories of consumption -- food, manufactures, and services. Individual ratios within each category were weighted by Soviet and US expenditure patterns. In order to obtain an over-all ratio for consumption, the ratios for food, manufactures, and services were weighted by USSR and US consumption expenditures for these categories for 1950.

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2) Investment

Ruble-dollar ratios were computed for the two primary components of investment -- producer durables and construction. The producer durables ratio was calculated by weighting ratios for particular types of machinery and equipment by estimates of 1950 gross value output in the USSR and by 1950 value of shipments in the US. A construction ratio was estimated on the basis of ratios for road construction, multistory housing, and construction materials. Aggregate investment ratios for the Soviet and US mixes were obtained by weighting the producer durables and construction ratios by their relative shares of investment in each country.

3) Defense

Ruble-dollar ratios were computed for 1951 for the various components of Soviet defense expenditures, such as personnel, POL, equipment, etc. The individual ratios were weighted by the distribution of defense expenditures in the USSR and US, and aggregate ratios were computed according to the Soviet and US mixes.

4) Administration

A ruble-dollar ratio for governmental administration was computed by comparing average wages of governmental administration employees in the USSR and civil service employees in the US for the year 1941, the latest year for which Soviet wage data on administrative employees is available. It is assumed that wages in both countries for this sector have increased by approximately the same multiple up to 1950.

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The following ruble-1950 dollar ratios for end use categories were obtained:

<u>End Use</u>	<u>Soviet Mix</u>	<u>US Mix</u>
Consumption	11.6	17.2
Investment	8.3	10.0
Defense*	4.3	4.7
Administration	2.5	2.5

b. 1950 Ruble-1953 Ruble Indexes

In order to utilize the 1950 ruble-1950 dollar end use conversion ratios, it was necessary to adjust the 1953 ruble figures for GNP to a 1950 basis. This was done by constructing a price deflator for each end use, in the following manner:

1) Consumption

The consumption category contains two major components, commodities and services, with respective weights of five and one. The commodity price inflator is based on an index of state store retail prices with an adjustment to account for the different price change in the collective farm market. The consumer services deflator is the index of money wage rates, since labor is the principal input in services.

2) Investment

The investment deflator used is the official deflator for state capital investment. It is obtained by comparing 1953 state capital investment in current rubles with that derived by moving 1950 investment by a volume index to 1953.

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\* 1951 ruble-1951 dollar ratio.

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~~SECRET~~3) Defense

Defense, by end use, is composed of three major elements -- personnel, procurement, and operations and maintenance. Personnel costs were moved from base year values with pay, food, and clothing price indexes. Other expenditures were moved primarily by the official investment cost index.

4) Administration

The administration grouping contains the two basic components of commodities and services with respective weights of about one to four and a half. Commodities include subsistence payments to internal security personnel, and services represent salaries to police and civil servants. The same component deflators used in the consumption category were employed here.

The resulting end use deflators are as follows:

<u>End Use</u>	<u>1950</u> <u>1953</u>
Consumption	117.9
Investment	108.1
Defense*	106.6
Administration	96.5

c. 1955 Dollar-1950 Dollar Indexes

For Consumption, Investment, and Administration, the official US Department of Commerce deflators for these end use categories were used to convert 1950 dollars to 1955 dollars. Defense end use figures were converted from 1951 dollars to 1955 dollars by a special national security

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index. The following category deflators were used:

<u>End Use</u>	<u><math>\frac{1955}{1950}</math></u>
Consumption	111.1
Investment	114.7
Defense*	103.4
Administration	112.4

d. 1953 Ruble-1955 Dollar Ratios

End use ratios to convert 1953 rubles to 1955 dollars were obtained for Consumption, Investment, and Administration by applying the 1950 ruble-1953 ruble and 1955 dollar-1950 dollar indexes to the basic 1950 ruble-1950 dollar ratios. In the case of Defense, the 1951 ruble-1953 and 1955 dollar-1951 dollar indexes were applied to the 1951 ruble-1951 dollar ratio. The following 1953 ruble-1955 dollar ratios were obtained:

<u>End Use</u>	<u>Soviet Mix</u>	<u>US Mix</u>
Consumption	8.9	13.1
Investment	6.7	8.1
Defense	3.9	4.3
Administration	2.3	2.3

These ratios were applied to GNP by end use at market prices in 1953 rubles, shown in Table 5, to obtain end use figures in 1955 dollars for 1953. The dollar figures for 1953 were then moved by the respective end use indexes in Table 1 to obtain four end use time series in 1955 dollars.

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\*  $\frac{1955}{1951}$

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APPENDIX A

1953 Sector Accounts

The accounts outlined in this appendix follow the procedures described in A Standardized System of National Accounts, OEEC, Paris, 1952. They provide the basis for the ruble estimates of Soviet GNP in 1953 as presented in Tables 5 and 6. The discrepancies between the data presented in these detailed sector accounts and the data presented in the report are largely the result of different classifications and degrees of aggregation.

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APPENDIX A

1953 Sector Accounts

The accounts outlined in this appendix follow the procedures described in A Standardized System of National Accounts, OEEC, Paris, 1952. They provide the basis for the ruble estimates of Soviet GNP in 1953 as presented in Tables 5 and 6. The discrepancies between the data presented in these detailed sector accounts and the data presented in the report are largely the result of different classifications and degrees of aggregation.



~~SECRET~~I. HOUSEHOLD SECTORB. Appropriation Account for 1953

4. Consumption and service expenditures		1. N.A.	
a. State & coop. purch.	396.5	2. Income from other sectors	
b. Coll. farm mkt. purch.	45.0	a. Wages & salaries, urban	
c. Purchased services	31.7	(1) State enter. & org.	370.1
d. Income in kind	104.2	(2) Coop. artisans	11.2
e. Trade union dues	3.8	(3) Military pay	21.6
f. Military subsistence	19.5	(4) Trade union salaries	0.8
g. Forced labor subsistence	8.5		<u>403.7</u>
	<u>609.2</u>		
5. Interest and rental Payments		b. Non-cooperative artisans, private professionals, etc.	18.0
a. Housing	18.0		
b. Imputed rent	3.3	c. Agricultural cash income	
	<u>26.3</u>	(1) Sovkhoz & MTS wages	16.6
Total Outlay on Goods and Services	<u>635.5</u>	(2) Money payments to coll. farmers	18.6
6. Direct taxes	46.1	(3) In-kind income disc.	2.5
		(4) Net income from sale of farm products	33.1
7. Savings			<u>70.8</u>
a. Net bond purchases	11.8	d. Incomes in kind	
b. Increment savings deposits	12.3	(1) Farm incomes in kind	104.2
c. Private housing	0.6	(2) Military subsist.	19.2
d. Prepaid insurance		(3) Forced labor subsistence	8.5
e. Increment in cash holdings	24.7		<u>131.9</u>
Transfer Items	<u>70.8</u>	e. Distributed profits	2.3
		f. Imputed rental incomes	8.3
		Total income currently earned	<u>635.0</u>

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B. Appropriation Account for 1953 (Continued)

3. Transfer Receipts from  
Other Sectors

a. Pensions and allowances	41.0
b. Student stipends	5.8
c. Interest receipts	7.2

Statistical discrepancy 17.3

TOTAL OUTLAYS 706.3

TOTAL INCOMES 706.3

C. Capital Account for 1953

3. Additions to fixed capital	1.2	1. Savings	24.7
4. Capital transfer to govt.		2. Borrowing from govt.	0.6
a. Net purchase of govt. securities	11.8		
b. Investment in savings deposits	<u>12.3</u>		
	25.3		<u>25.3</u>

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~~SECRET~~II. ECONOMIC ENTERPRISE SECTORA. Production Account for 1953

4. Purchase from other sectors		1. Sales to other accounts	
a. Purch. from state reserves	8.8	a. (Not applicable)	
b. Purch. from foreign acct.	<u>3.5</u>	b. Sales to households	468.7
	12.3	c. Sales to govt. on	
		current account	
5. Indirect taxes		(1) Military subsist.	19.5
a. Turnover taxes	243.6	(2) Military procurement	
b. Miscellaneous taxes	<u>53.2</u>	& operations	63.9
	296.8	(3) Health & education	23.9
6. Capital consump. allowances	37.2	(4) Internal security	7.0
7. National income		(5) Administration	3.3
a. Compensation of employees		(6) Other activities	31.0
(1) Direct incomes	403.4	(7) Trade unions	<u>3.7</u>
(2) Social insurance	<u>23.2</u>		152.3
	426.6	d. Sales to household	
b. (Not applicable)		capital account	1.2
c. Profits		e. Sales on econ. enter.	
(1) State enterprises	89.8	capital account	179.6
(2) Enter. & econ. org.	<u>24.1</u>	f. Sales to govt.	
	113.9	capital account	
d. N.A.		(1) Fixed investment	7.4
e. Coll. farm investment		(2) State reserve	
in kind	7.3	accretions	9.2
		(3) Gold purchases	<u>3.7</u>
			20.3
		g. Collective farm	
		investment in kind	7.3
		2. Inventory changes	15.3
		3. Subsidy receipts	
		a. MTS	6.7
		b. State farms	<u>8.4</u>
			15.1
		Statistical	14.3
			<u>894.1</u>
	<u>894.1</u>		

894.1

894.1

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## II. ECONOMIC ENTERPRISE SECTOR

### B. Appropriation Account for 1953

4. Wage and salary payments		1. National income by sector	
a. Direct incomes	403.4	a. Compensation of employees	
b. Social insurance	<u>23.2</u>	(1) Direct incomes	403.4
	426.6	(2) Social insurance	<u>23.2</u>
5. N. A.			426.6
6. Direct taxes		b. Coll. farm surplus	7.3
a. On state enterprises	70.3	c. Profits	
b. On coop. & coll. farms	<u>11.2</u>	(1) State enterprises	89.8
	81.5	(2) Coll. farms and	
7. Profit distributions to owners	3.3	cooperatives	<u>24.1</u>
8. Retained earnings			113.9
a. State enterprises	19.5	2. Incomes from other sectors	
b. Coll. farms & coops.	10.6	a. Rental receipts	2.5
c. Coll. farm invest. in kind	<u>7.3</u>	b. (N.A.)	
	37.4	c. (N.A.)	
			<u>2.5</u>
		Statistical discrepancy	5.8
TOTAL OUTLAYS	<u>548.8</u>	TOTAL INCOMES	<u>548.8</u>

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## II. ECONOMIC ENTERPRISE SECTOR

### C. Capital Account for 1953

5. Gross enterprise investment		1. Retained earnings	
a. Capital repairs	33.6	a. State enterprises	19.5
b. New capital investment	153.3	b. Coll. farms & coops.	10.6
c. Additions to inventories	<u>15.3</u>	c. Earnings in kind	<u>7.3</u>
	202.2		37.4
6. (N. A.)		2. Capital consump. allowance	37.2
7. (N. A.)		3. Capital transfers from govt	
		a. Fixed capital	113.7
		b. Working capital	<u>4.3</u>
			118.0
		4. Borrowing from govt.	
		a. Short-term credit	5.0
		b. Long-term credit	<u>3.7</u>
			8.7
		Statistical discrepancy	0.9
Total Investment	<u>202.2</u>	Total Savings	<u>202.2</u>

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### III. GOVERNMENT SECTOR

#### A. Production Account for 1953

2. Compensation of employees	97.6	1. Value of govt. services	249.9
3. Purchases from enterprises	<u>152.3</u>		
	249.9		<u>249.9</u>

#### B. Appropriation Account for 1953

2. Purchase of govt. services	249.9	1. Income from other sectors	
3. Transfers to households (See I, B, Outlay 3)	54.0	a. Indirect taxes	
4. (N. A.)		(1) Turnover tax	243.6
5. Subsidy payments (See II, B, Outlay 3)	15.1	(2) Misc. taxes	52.2
6. Saving	133.1	b. Direct taxes	46.1
		c. Profits taxes	
		(1) State enterprises	70.3
		(2) Other	<u>11.2</u>
			81.5
		d. Social insurance	23.2
		e. Trade union receipts	<u>4.5</u>
	<u>452.1</u>		<u>452.1</u>

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### III. GOVERNMENT SECTOR

#### C. Capital Account for 1953

4. Transfers to other sectors		1. Savings	133.1
a. Fixed investment	113.7	2. Capital transfers in	
b. Working capital	4.3	a. Bond sales to house-	
c. Gold purchases	3.7	holds	11.8
d. State reserve accretions	9.2	b. Increment in saving	
	<u>130.9</u>	deposits	12.3
5. Lending		c. Gold sale on foreign	
a. Enterprises	8.9	account	3.6
b. Households	0.6	d. State reserve sales	9.0
	<u>9.5</u>		<u>36.7</u>
6. Government investment			
a. Purch. from enter.			
capital account	7.4		
7. Additions to cash balance	19.9		
Statistical discrepancy	<u>2.1</u>		
	<u>169.8</u>		<u>169.8</u>

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IV. FOREIGN SECTOR

A. Production Account for 1953

1. Export of goods and services	0	2. Import of goods and services	3.6
	<u>0</u>	3. Balance on production account	<u>-3.6</u>
			0

B. Appropriation Account for 1953

2. Balance on production acct.	-3.6	1. Surplus of nation on current account	-3.6
3. Net factor payments to nation	<u>0</u>		<u>-3.6</u>
	-3.6		

C. Capital Account for 1953

1. Surplus on current account	-3.6	1. N.A.	
4. Transfers from rest of world to government account	3.6	2. Transfers to rest of world by government	0
5. N.A.	<u>0</u>		<u>0</u>
	0		0



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V. CONSOLIDATED SECTOR ACCOUNTS FOR 1953

A. Production Account

1. Depreciation	37.2	1. Sales to household consumption	635.8
2. Indirect taxes - subsidies		2. General govt. purchase goods and services	245.4
a. Indirect taxes	243.6	3. Gross domestic investment	
b. Miscellaneous taxes	53.2	a. Households	1.2
c. Subsidies	<u>-15.1</u>	b. Enterprises	202.2
	281.7	c. Government	<u>7.4</u>
3. Value added			210.8
a. Households	633.0	4. Foreign balance of nation on production account	-3.6
b. Social insurance	23.2	Statistical discrepancy	0.9
c. Enterprises	<u>113.9</u>		
	770.1		
GNP	1,089.0	GNP	1,089.0

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V. CONSOLIDATED SECTOR ACCOUNTS FOR 1953

B. Appropriation Account

1. Household consumption	635.5	1. National income	
2. Government purchases of goods and services	245.4	a. Households	656.2
3. Savings	170.9	b. Enterprises	<u>113.9</u>
			770.1
		2. Indirect taxes and subsidies	
		a. Indirect taxes	243.6
		b. Miscellaneous taxes	53.2
		c. Subsidies	<u>-15.1</u>
			281.7
		3. N. A.	
Net National Product	1,051.8	Net National Product	1,051.8

C. Capital Account

1. Gross domestic investment	210.8	1. Depreciation	37.2
		2. Savings	<u>173.6</u>
Investment	210.8	Saving	210.8

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